Examining the Importance of the Tactical Air Coordinator (Airborne)

Maj Gregory M. Blom, USAF
Capt Matthew B. Chapman, USAF

Both the correct application of the force-multiplying effects of airpower and the failures resulting from its misapplication have been evident in the twenty-first century. One must conduct a careful examination of the misapplications of airpower to prevent future mistakes and ensure mission success. Any discussion of the minor errors that have occurred would be lengthy, but one fatal misapplication of airpower must be dissected because of its implications for troops on the ground. Antoine Henri Jomini captures the criticality of incorporating lessons learned in future military operations: "It is true that theories cannot teach men with mathematical precision what they should do in every possible case; but it is also certain that they will always point out the errors which should be avoided; and this is a highly-important consideration, for these rules thus become, in the hands of skillful generals commanding brave troops, means of almost certain success."[1]

The execution of robust close air support (CAS) without a tactical air coordinator (airborne) (TAC[A]) is an egregious error that costs lives. Although codified in general terms in Joint Publication (JP) 3-09.3, *Close Air Support*, the TAC(A) has either gone unfilled or has been underapplied in numerous actions, most notably in Operation Anaconda in Afghanistan and in operations over Najaf and Fallujah in Iraq.

In March 2002, US and coalition forces met stiff resistance during Anaconda when they encountered a well-entrenched enemy force much larger than expected. By many accounts, this complex, robust operation was not well planned with regard to air support. Multiple factors contributed to the ineffective air support to ground operations.[2] These included both the close proximity of forces and too many joint terminal attack controllers (JTAC) who were not properly organized and spaced for the operation; moreover, the sheer number of air support requests overwhelmed the system. The virtually indistinguishable terrain and failure to accurately prioritize the requests made it very difficult for CAS responders to tell the difference between those that had been filled and those awaiting support. Furthermore, insufficient air support had been allocated to fill them. The close proximity of friendly forces created danger-close situations made even more complicated by the kinetics-delivery limitations caused by the terrain.[3]

In the battles for Fallujah and Najaf, US forces faced multiple airpower-integration challenges. Shared airspace-control authorities between Marine and Air Force command and control (C2) agencies led to major issues with coordination, deconfliction, and flow of air assets, slowing response times and creating delays of up to 20 minutes once aircraft were over the target area to make contact with the forward air controller or JTAC.[4]

The problems in Anaconda and the operations over Najaf and Fallujah could have been mitigated with an existing capability—the TAC(A). However, the joint community does not use this coordinator because of a lack of understanding. Specifically, the concept is not defined with enough detail in joint publications, and the training in joint exercises does not address it. That said, what is the TAC(A), and how does it enable operations synergy in a joint environment?

Understanding the Tactical Air Coordinator (Airborne)

Current doctrinal understanding of the TAC(A) holds that it augments the air support operations center (ASOC) by extending its range and allowing it to send and receive information at greater distances—essentially radio relay.[5] JP 3-09.3, the only joint publication that defines the TAC(A), provides only a broad overview of its employment and does not mention its most essential function—battle management command and control (BMC2).[6] Two essential components enable the TAC(A) to provide BMC2: capable platforms and highly trained operators.

Capable platforms employ networked systems, including radio communication, data links, tactical chat, and surveillance radars; further, they should have long loiter times, stability, and redundant systems. Capable operators can run C2 systems and functions competently, offering radar and sensor control as well as making and implementing decisions. Noted strategist Colin Gray once observed that aircraft "are lethally hostage to the quality of applied technology and to the skill of air and ground crews. In air as well as sea warfare, enthusiastic amateurs die in short order."[7] Nowhere is this more applicable than in BMC2, whose very nature requires skilled professionals leveraging capable technology to direct employment of airpower. Platforms such as the Royal Air Force's Sentinel and the US Navy's P-3 LSRS possess networked and integrated capabilities but do not have battle-management professionals to conduct BMC2. Rather, they are relegated to surveillance-only missions.

Although most Air Force practitioners of BMC2 naturally gravitate to air assets as the primary C2 weapons system, the "right platform" does not necessarily have to be airborne. When performed by assets such as the Airborne Warning and Control System or the Joint Surveillance Target Attack Radar System (JSTARS), the "A" in "TAC(A)" is applicable. However, the tactical air coordinator is often ground-based, out of the control and reporting center or tactical air operations center. The current definition of the TAC(A) does not account for ground-based agencies; however, like their airborne counterparts, they are globally connected battle-management hubs. Tactical air coordinators, whether airborne or ground-based, act as information fusion centers that enable effects while minimizing friendly losses.

Specifying the capabilities and effects of these tactical BMC2 fusion centers would add a level of clarity that does not currently exist in TAC(A) source documents. This clarity would assist mission planners in making better decisions about allocation requests for assets and help ensure that TAC(A)s are integrated effectively into operations.

When utilized properly, the TAC(A) is not simply a relay platform but a tactical C2 platform capable of battle management. It combines capable platforms that enable networked operations and capable people to leverage those networks and provide battle management. Whether this occurs on the E-8C, E-3, E-2, or MC-12—or in a ground-based control and reporting center or tactical air operations center—the BMC2 function exists.[8] BMC2 creates operations synergy by (1) optimizing tactical capabilities, (2) providing information dominance, and (3) exercising decision superiority (see the figure below).[9]

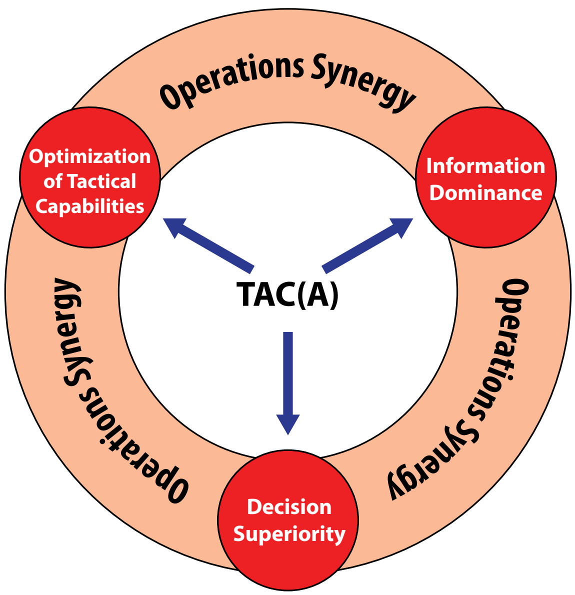

Figure. TAC(A) enabling operations synergy

Optimizing Tactical Capabilities

Optimizing the tactical capabilities of airpower in its area of control is the essential function of battle management.[10] Simply put, such optimization involves leveraging all knowledge, training, and planning to place the right asset, at the right location, at the right time to affect the battlespace in favor of friendly forces. Considerations include both weapons and sensor employment. Military strategist J. C. Slessor captures the essence of optimizing tactical capabilities in his definition of concentration: "The application of this principle [concentration] consists in the concentration and employment of the maximum force . . . at the decisive time and place."[11] TAC(A)s can optimize overall tactical capabilities by understanding asset-employment procedures, weaponeering, fuel loads, sensors, communication, and data links. They manage the airspace by using deconfliction techniques, hold points, and routing procedures; TAC(A)s also maintain force accountability.[12]

Slessor also notes that "the capacity to concentrate the maximum force at the decisive time and place obviously involves as a first essential a clear understanding of *what is the decisive place at the time*" (emphasis in original).[13] Positioning aircraft in time and space is the first step towards creating operations synergy. It allows friendly forces to best employ their technology and sensors to enable the flow of information, which enables the TAC(A) to gain and maintain information dominance.

Providing Information Dominance

The degree to which reality is understood and communicated across the battlespace either enables mission accomplishment or contributes to failure. Information control is specifically applied to the understanding of friendly capabilities and force posture as well as knowledge of the adversary's disposition and operational environment. The understanding of available friendly capabilities and force posture drives options for tactical action. Surveillance of the operational environment and adversary disposition allows for threat warning, identification of ambiguities, and anticipation of potential courses of action. The TAC(A)'s ability to supply information dominance requires harnessing, filtering, and communicating relevant information in a timely manner.[14]

When employed correctly, the TAC(A) collects, validates, and acts on information through employing sensors and operators trained in their usage. The coordinator utilizes networked sensors, data links, and communication systems to build air, ground, and surface surveillance pictures; offer current situation updates; and locate and identify emerging targets.[15] In his study of airpower in Operation Enduring Freedom, Benjamin Lambeth makes the following observations regarding the harnessing, filtering, and communicating of relevant information: "The multiplicity of interlinked and mutually supporting sensors enabled a greatly increased refinement of ISR input over that which had been available during earlier conflicts . . . [leading to the] merging of multiple sources of information and the channeling of the resulting product into the cockpits of armed aircraft ready to act on it."[16] Mr. Lambeth describes the function of the TAC(A) with regard to leveraging knowledge of the enemy disposition. The coordinator manages and fuses sensors to refine knowledge of the enemy's disposition and of direct friendly action.

Directing friendly action calls for the TAC(A) to manage information on friendly-asset posture and to leverage available forces to facilitate mission accomplishment. Doing so includes knowing the location, station/loiter time, and weaponry available as well as the effects of both airborne and ground-based offensive elements. The TAC(A)'s ability to build and maintain situational awareness, filter information, and communicate it enables timely and effective decision making.

Exercising Decision Superiority

Decision superiority entails the ability of one force to gather information faster, make decisions quicker, and execute them before the enemy can react.[17] Col John Boyd's observe, orient, decide, act (OODA) loop framework offers perhaps the most famous understanding of the importance of decision superiority.[18] A force that possesses decision superiority can overcome its adversary despite disadvantages such as having fewer forces and less effective weaponry.

The TAC(A) should execute operations in accordance with the commander's intent and priorities through building and maintaining situational awareness across the tactical and operational levels of warfare. The coordinator must leverage the above-mentioned battle-management functions combined with his or her inherent C2 decision-making competencies to apply the rules of engagement, manage ambiguous C2 authorities, and recommend solutions to tactical problems.[19] Finally, the TAC(A) should assess the impacts of air tasking order changes and tactically retask assets to compensate.[20]

The TAC(A) should exercise decentralized decision-making authority, an ability made increasingly important by the advancement of a near-peer adversary's capabilities. In contested, degraded, or operationally limited environments, the tactical level must include decision makers. Currently, technological advancements are causing tactical C2 agencies to experience attrition in the realm of delegated decision-making competencies. Such advancements have made it possible for operational and strategic leadership to maintain a degree of situational awareness on the tactical fight as never before and therefore make tactical decisions at the operational and strategic levels. TAC(A) operators require knowledge of their leaders' operational and strategic intent and the authority to make command decisions in accordance with rules of engagement and an acceptable level of risk.[21]

Vignette

JP 3-09.3 only scratches the surface of the TAC(A) role, relegating it to the status of a relay asset and thereby limiting the coordinator to passing words to and from the ASOC, tactical operations center (TOC), and aircraft. However, as discussed previously, a correctly employed

TAC(A) plays a major role in ensuring mission success. The coordinator can position friendly air assets in the safest and most efficient manner to maximize their operational capabilities, allowing the TAC(A) to control the flow of information and thus establish dominance in the information domain. With the right balance of delegated authorities from higher headquarters, the TAC(A) can then execute the planned mission, aiding decision superiority on the operational and tactical levels. Doing so synergizes operations that enable friendly forces to produce superior effects on enemy combatants.

This article has addressed the limitations of JP 3-09.3 in regard to TAC(A) and has prescribed capabilities and functions that the coordinator should provide. The following fictional scenario reinforces these principles.

Taliban forces numbering more than 1,000 have seized an Afghan town. Friendly forces intend to take it back and restore government services to the population. Ground units are planning a major combat operation that will span several weeks. This particular population center is highly urban with mountains surrounding it on three sides. Coalition mission planners have divided the town and surrounding area into nine zones, each with a JTAC team. The ASOC and air and space operations center have coordinated for 40 CAS sorties per day during this operation.

The tactical problem for this mission lies in coordinating the large number of assets and various JTAC units in close proximity to each other. Normally, significant geographic separation exists between JTACs, enabling the use of a single initial point so that the controllers can flow aircraft towards their position and enable fires against enemy positions. However, in this scenario, there are numerous aircraft in congested, overlapping airspace and JTACs close together.

Successful employment depends upon detailed integration. If each JTAC operated independently, then maximizing the totality of airpower would be impossible. Aircraft would likely remain underutilized or used against lower-priority taskings. Additionally, the threat of midair collisions and friendly fire would be significant. Adding a BMC2 asset to perform the functions of the TAC(A) would synchronize operations by optimizing tactical capabilities, offering information dominance, and ensuring decision superiority.

The TAC(A) immediately optimizes tactical capabilities *by establishing and controlling routing from the hold point through the congested airspace to each of the nine JTACs. After dropping ordnance, assets are then routed back to the hold point or to the tanker for additional fuel, thus freeing the JTACs and forward air controller (airborne) to prioritize and control the terminal fires. Currently, the tanker cell includes two two-ships of A-10s, and a two-ship of GR-4s transits the airspace en route to another tasking.*

The TAC(A) provides information dominance *by facilitating communication between the TOC and air assets. The TAC(A), who checks in aircraft and offers force accountability, coordinates directly with the TOC, advising it of mass ground movements that appear to be flanking friendly positions.*

Realizing that this is a potential troops-in-contact situation, the coordinator exerts decision superiority *by passing this assessment to the AOC and TOC, rerouting the GR-4s to the hold point, and coordinating retasking authority from the C2 director of operations. Simultaneously, the TAC(A) coordinates to expedite one of the two-ships of A-10s from the tanker back to the hold point and monitors the JTAC frequencies in the vicinity of the ground movement. As the GR-4s check in at the hold point, the TAC(A) gives them a situation update, the JTAC call sign, and frequency. As this happens, the JTAC takes fire, requests support, and the GR-4s check in on his tactical frequency with high awareness of the developing tactical situation.*

This *operations synergy* is the essence of what a TAC(A) provides.

Conclusion

More than a communications relay platform, the TAC(A) remains underapplied in current operations. This networked and integrated information fusion and battle-management center is an effects enabler that can protect friendly forces and deliver debilitating effects on the adversary. Proper application of the TAC(A) enables operations synergy, achieved only when the right assets with onboard, trained operators are in a position to optimize tactical capabilities, facilitate information dominance, and enable decision superiority. Current fielded tactical C2 platforms have the capabilities and trained personnel to perform this role.

The battle-management functions and tasks associated with the TAC(A) are applicable not only to CAS but also to a variety of C2 missions. In the case of air operations in maritime surface warfare, the Navy organically developed a TAC(A) analogue in maritime air control. Because the special operations community needs a TAC(A), an equivalent role has been developed in Air Force Special Operations Command with duties very similar to those of a TAC(A) but executed in a limited geographic area.

Whether airborne or ground-based, supporting special operations or CAS, the BMC2 functions of the TAC(A) remain the same. As evidenced in Najaf and Fallujah, the absence of a TAC(A) limits the effectiveness of airpower applications. Because the growing complexity of joint and coalition operations will increase reliance on the TAC(A), it is paramount that the Air Force define this role based on its BMC2 capabilities, offer training in its employment, and execute it. ✪

Notes

1. Antoine Henri Jomini, *The Art of War*, new ed., trans. G. H. Mendell and W. P. Craighill (Westport, CT: Greenwood Press, 1971), 323.
2. Maj Erik Haeuptle, interview by Maj Greg Blom, 2 April 2014. These lessons learned are based on an e-mail exchange with Haeuptle, a former air liaison officer.
3. Ibid.
4. Maj Fred H. Allison, USMC, Retired, *Lessons Learned: The USMC Approach to Close Air Support in Fallujah (Part Two)*, 7 February 2010, http://www.sldinfo.com/lessons-learned-the-usmc-approach-to-close-air-support-in-fallujah-part-two/. Major Allison cites the Marine Corps direct air support center (DASC) as the eventual solution to this air coordination issue in Fallujah, but the authors of this article see limitations in using the DASC in a nonpermissive environment or during contested, degraded operations.

5. “**TAC(A) provides an extension** for the ASOC/DASC with the goal of extending the ASOC/DASC’s range and ability to send and receive tactical information. The TAC(A) acts as a **communications relay** between the JTAC and attack aircraft as well as other agencies of the TACS. . . . [boldface in original] In the TACS/AAGS [Army air-ground system], TAC(A) provides communications relay between the TACP [tactical air control party] and attack aircraft, as well as other agencies of the TACS, in the absence of JSTARS, or a FAC(A) [forward air controller (airborne)]. The TAC(A) also expedites CAS aircraft-to-JTAC handoff during ‘heavy traffic’ CAS operations. Air Force two-ship FAC(A) flights, especially in higher threat environments, may divide responsibilities so one aircraft fills the normal FAC(A) role while the second becomes a TAC(A).” Joint Publication 3-09.3, *Close Air Support*, 8 July 2009, 74.

6. Ibid.

7. Colin S. Gray, *Modern Strategy* (New York: Oxford University Press, 1999), 234.

8. Air Force Tactics, Techniques, and Procedures (AFTTP) 3-1, *MC-12*, 25 January 2013. TAC(A) is mentioned as part of the MC-12’s role in support of special operations forces.

9. Lt Col Jonathan Zall, “Weapons Officer Talk: What Is Tactical C2?” (lecture, 461st Operations Group, Robins AFB, GA, 12 March 2014). Lieutenant Colonel Zall developed these battle-management concepts. Although not applied directly to TAC(A), they were discussed in terms of their relationship to the role of tactical C2.

10. Ibid.

11. J. C. Slessor, *Air Power and Armies* (Tuscaloosa, AL: University of Alabama Press, 2009), 62.

12. These C2 tasks were first listed in AFTTP 3-1, *TACS*, 30 September 2009, and were moved to attachment 6 in the last edition (1 February 2013).

13. Slessor, *Air Power and Armies*, 63.

14. Zall, “Weapons Officer Talk.”

15. These C2 tasks were listed in AFTTP 3-1, *TACS*, until the last edition of 30 September 2009.

16. Benjamin S. Lambeth, *Air Power against Terror: America’s Conduct of Operation Enduring Freedom* (Santa Monica, CA: RAND Corporation, 2005), 254.

17. Zall, “Weapons Officer Talk.”

18. See Grant Tedrick Hammond, *The Mind of War: John Boyd and American Security* (Washington, DC: Smithsonian Institution Press, 2001). The OODA loop is a well-established tool for military problem solving and decision making. Boyd was famous for performing the loop within seconds during air-to-air intercepts.

19. Allison, *Lessons Learned*. During CAS operations in Fallujah, the two competing air control organizations—DASC and AOC—owned different parts of the airspace, creating coordination issues and delays in moving CAS assets into position to support ground troops.

20. These C2 tasks were listed in AFTTP 3-1, *TACS*, until the last edition of 30 September 2009.

21. See Lt Col Alan Docauer, “Peeling the Onion: Why Centralized Control/Decentralized Execution Works,” *Air and Space Power Journal* 28, no. 2 (March–April 2014): 24–44.

Maj Gregory M. Blom, USAF

Major Blom (BS, Florida State University; MS, Embry-Riddle Aeronautical University) is an assistant director of operations of the 16th Airborne Command and Control Squadron, 461st Air Control Wing, Robins AFB, Georgia. He is responsible to the squadron director of operations for daily mission execution and employment of the E-8C Joint Surveillance Target Attack Radar System (JSTARS) aircraft. He develops contingency plans and programs, analyzes operational mission needs, and ensures combat mission-readiness of 208 Air Force Airmen providing command, control, intelligence, surveillance, and reconnaissance (C2ISR) support to US combatant commanders. Major Blom has been the chief of wing weapons and tactics for the 461st Air Control Wing and chief of group weapons and tactics for the 552nd Operations Group. He has more than 600 combat and combat-support hours on the E-8C JSTARS and E-3B/C Airborne Warning and Control System (AWACS), having flown missions during combat operations in Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn as well as counternarcotics and homeland defense missions in support of US Northern and Southern Commands. Major Blom is a graduate of the US Air Force Weapons School, Air Command and Staff College, and Squadron Officer School; he maintains combat mission-ready status as an E-8C mission crew commander.

Capt Matthew B. Chapman, USAF

Captain Chapman (BS, Middle Tennessee State University; MS, Embry-Riddle Aeronautical University) is an executive officer to the commander, 461st Operations Support Squadron, 461st Air Control Wing, Robins AFB, Georgia. He is directly responsible for the development and implementation of executive policies for 135 unit Airmen. Captain Chapman has served previously as the special access program manager for Combined Joint Task Force Troy in Iraq as well as the Joint Surveillance Target Attack Radar System (JSTARS) group contingency operations officer, responsible for planning rapid deployment, contingency, and counterdrug missions directed by the secretary of defense. Captain Chapman has flown combat and combat support missions in support of US Central Command as well as counternarcotics missions in support of US Northern and Southern Commands.

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